

AMENDMENTS TO THE CLAIMS

1. - 25. Canceled

26. (Previously Presented) A communication device comprising:

- a baseband symbol generator;

- a dipole antenna;

- a power amplifier coupled to said dipole antenna, the power amplifier being configured to receive a first output of said baseband symbol generator from a signal path that includes a fractional-N sigma-delta modulator having a pre-emphasis filter, to receive a second output of the baseband symbol generator, and to amplify the first output with a gain that is controlled by a varying amplitude of the second output;

wherein said fractional-N sigma-delta modulator includes at least:

- a sigma-delta converter coupled to the pre-emphasis filter; and

- a fractional-N phase locked loop unit coupled to an output of said sigma-delta converter,

- wherein a transfer function of said pre-emphasis filter is to be optimized according to predefined optimization criteria; and

- wherein said optimization criteria are related to an input to said pre-emphasis filter and are related to an input to a voltage controlled oscillator of the fractional-N phase locked loop unit.

27. - 33. Canceled

34. (Previously Presented) The communication device of claim 26, wherein said transfer function of said pre-emphasis filter is a finite impulse response.

35. (Previously Presented) The communication device of claim 26, wherein said optimization criteria includes a mean squared error of said input to said pre-emphasis

filter and the input to a voltage controlled oscillator of said fractional-N phase locked loop unit.

36. – 38. Canceled

39. (New) The fractional-N sigma-delta modulator of claim 26, further comprising:
an adaptive filter to compare said input to said pre-emphasis filter and said input to said voltage controlled oscillator and to adapt the optimization criteria in accordance with a result of said comparison.

40. (New) The communication device of claim 39, wherein said adaptive filter includes an analog-to-digital (A/D) converter coupled to said input to said voltage controlled oscillator.